

REMARKS

Claim 12 was amended above. Claims 8-14 remain in the application for consideration by the examiner.

Claims 12-14 were rejected under 35 U.S.C. § 112, second paragraph, as being vague and indefinite for failing to particularly point out and distinctly claim the subject matter applicant regards as the invention. The Official action stated it is unclear/vague how the first, second and third valves are positioned within the claimed device. In addition, the Official action stated that the expression "a xenon gas piping for connecting the xenon gas piping" is unclear and vague. Finally, the Official action stated it is also unclear and vague what a "mixture piping" is as claimed. Claim 12 was amended above to remove these alleged unclear and vague words and expressions. Applicant respectfully submits that amended claim 12 and claims 13 and 14 that depend thereon particularly point out and distinctly claim the subject matter regarded as the invention within meaning of 35 U.S.C. § 112, second paragraph. Therefore, applicant respectfully requests that the examiner reconsider and withdraw this rejection.

Since the foregoing amendments only correct informalities in the claims and, in particular, remove the rejection in the 35 U.S.C. § 112, second paragraph; applicant respectfully request that foregoing amendments be entered under the provisions of 37 C.F.R. § 1.116(b) for

the purposes of placing the application in condition for allowance or for the purposes of appeal.

The Official action set forth two prior art rejections of applicant's claims. The first was a rejection of Claims 8-11 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,014,398 of Hofmann *et al.* (Hofmann) in view of U.S. Patent No. 5,090,020 of Bedwell. The second was a rejection of 12-14 under 35 U.S.C. § 103(a) as being unpatentable over Hofmann in view of applicant's admitted prior art (AAPA). These rejections as set forth from the bottom of page 2 through page 4 of the Official action

In the first rejection over Hofmann and Bedwell, the Official action stated that it is well known in the art that He is an appropriate buffer gas for ArF excimer lasers, apparently as shown by Bedwell. The Official action concluded that it would have been obvious to use He as a buffer gas in Hofmann.

The teachings of Hofmann allegedly proposed, with respect to the ArF excimer laser, an effect obtained by adding Xe gas to a buffer gas mainly composed of Ne gas (i.e., Ne buffer gas). In contrast thereto, applicant's claimed invention is directed to adding Xe gas to a buffer gas mainly composed of He gas (i.e., He buffer gas). The combined teachings of Hofmann and Bedwell would not lead one of ordinary skill in the art to believe that any Xe gas to a buffer gas mainly composed of Ne gas (as allegedly proposed in Hofmann) would have the same effect as adding Xe

gas to a buffer gas proposed mainly of He gas, as presently claimed.

While the teachings of Bedwell propose buffer gases such as He and Ne, there is absolutely no discussion in Bedwell concerning the addition of small amounts of Xe to a laser gas having a buffer gas mainly composed of He, as presently claimed. It is well known in the art that chemical reactions and interactions are unpredictable in nature. Therefore, the fact that adding Xe gas to a buffer gas of Ne in Hofmann may have a certain effect certainly could not lead one of ordinary skill in the art to believe that adding Xe to a buffer gas mainly composed of He would have the same effect. Based on the teachings of Bedwell, which have no discussion therein concerning the combination of adding a small amount of Xe to a buffer gas mainly composed of He, one of ordinary skill in the art certainly would not expect that the buffer gas of Ne and He are interchangeable when a small amount of Xe is respectively added thereto, due to the unpredictable nature of chemical reactions and interactions. This amounts to nothing more than is at best an "obvious to try" situation, which is not the standard patentability. "Obvious to try" cannot form a basis for obviousness within the meaning of 35 U.S.C. §103. See, for example, *In re Goodwin et al.*, 198 USPQ 1 (CCPA 1978) and *In re Antonie*, 195 USPQ 6 (CCPA 1977), which held that an "obvious to try" standard disregards the invention as a whole concept of 35 U.S.C. §103.

Since there can be no expectation of success for adding a small amount of Xe to a buffer gas mainly composed of He from the teachings of Hofmann and Bedwell, these teachings cannot motivate one of ordinary skill in the art to the invention as set forth in applicant's claims. In other words, there is absolutely no reason within the teachings of Hofmann and Bedwell that would motivate one of ordinary skill in the art to use a small amount of Xe in a laser gas having a buffer gas mainly composed of He, as required in the present claims.

As described in applicant's specification, page 19, lines 7-16, the presently claimed invention, as set forth in claim 8, provides unexpected advantageous effects including the fact that the laser device can be small-sized and outputs are stabilized, etc. The importance and significance of using He in place of neon, such as proposed in Hofmann, is illustrated in Fig. 2 of the present application. This diagram shows that at above a pulse frequency of 1 kHz an unexpected advantage is achieved by the use of He as opposed to Ne. Separate arguments for the patentability of claims 9-11 were set forth in applicant's response filed on April 25, 2002, which arguments are incorporated herein by reference.

For the reasons set forth above, applicant respectfully submits that the presently claimed invention is distinguishable from the teachings of a Hofmann and Bedwell within the meaning of 35 U.S.C. § 103. Therefore, applicant respectfully requests that the examiner reconsider and

withdraw all the prior art rejections against applicant's claims as set forth in the outstanding Office Action.

In the second rejection, the Official action took the position that the AAPA admits that the prior art includes an ultraviolet laser device comprising Xe in gas cylinder, an ultraviolet laser gas cylinder, and an ultraviolet laser gas supply pipe, etc., citing page 5, lines 18-28, of applicant's specification disclosure. Applicant respectfully submits that the discussion on page 5, lines 18-20, of the present specification disclosure is not prior art against the claims of this application within the meaning of 35 U.S.C. §102 or 35 U.S.C. §103.

In a previous amendment to page 5, lines 16-17, of applicant's specification disclosure, the expression "Japanese Patent Application Laid-Open Publication No. 11-23709" was changed to "Japanese Patent Application No. 11-23709." This amendment corrected a mistranslation. Japanese Patent Application No. 11-23709 was deemed withdrawn by a legal fiction, because a new patent application (Application No. 11-272496) was filed claiming the internal priority based on Japanese Patent Application No. 11-23709. The new patent application No. 11-272496 was laid-open as Japanese Patent Application Laid-Open Publication No. 2000-294856, which contains all of the contents of the Japanese Patent Application No. 11-23709.

From the above, it can be understood that Japanese Patent Application No. 11-23709 was never published, and therefore, cannot be

prior art against the claims of the present application under any provision of 35 U.S.C. in §102 or 35 U.S.C. §103. Japanese Patent Application Laid-Open Publication No. 2000-294856 was published on October 20, 2000, which is after the filing date of the present application. Therefore, this publication also cannot be prior art against the claims of the present application under any provision of 35 U.S.C. in §102 or 35 U.S.C. §103.

For the foregoing reasons, the original use of the expression "prior art" on page 5, line 18, of applicant specification disclosure was an inadvertent typographical error. In order to correct applicant's specification, the expression "prior art" was changed to the more accurate word "art" in the foregoing amendments.

From the above discussions, it can be understood by any person skilled in the art that the discussion on page 5, lines 18-20, is not prior art to the presently claimed invention. Therefore, applicant respectfully submits that the rejection of claims 12-14, which incorrectly relied on the discussion in applicant's specification disclosure at page 5, lines 18-20, for prior art must be reconsidered and withdrawn.

For the examiner's information, applicant is attaching hereto an English abstract for Japanese Patent Application Laid-Open Publication No. 2000-294856. Attention is respectfully directed to the figure shown therein and the corresponding discussion thereof. The piping configurations in present claims 12-14 correspond to figure 9 of

applicant's specification disclosure. By simply comparing figure 9 of applicant's specification disclosure to the figure in the attached English abstract for Japanese Patent Application Laid-Open Publication No. 2000-294856, it is readily apparent that the showing in Japanese Patent Application Laid-Open Publication No. 2000-294856 does not contemplate or suggest the structure required in present claims 12-14. This structure in present claims 12-14 is also not contemplated or suggested by the teachings of Hofmann and Bedwell.

For the foregoing reasons, applicant respectfully requests that the examiner reconsider and withdraw the prior art rejection of claims 12-14, as set forth in the outstanding Office action.

Based on the foregoing, applicant respectfully requests favorable consideration and a formal allowance of claims 8-14. While it is believed that the present response places the application in condition for allowance, should the examiner have any comments or questions, it is respectfully requested that the undersigned be telephoned at the below listed number to resolve any outstanding issues.

In the event this paper is not timely filed, applicant hereby petitions for an appropriate extension of time. The fee therefor, as well as any other fees which may become due, may be charged to our deposit account No. 22-0256.

Respectfully submitted,
VARNDELL & VARNDELL, PLLC
(formerly Varndell Legal Group)

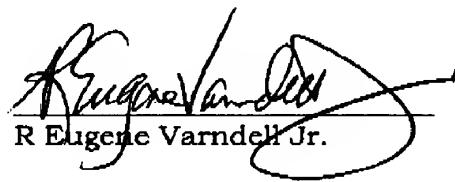


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Certification of Transmission

I hereby certify that this correspondence; which totals 17 pages including a Petition for One-month Extension of Time (2 pages, original and duplicate), a Response after Final under 37 C.F.R. § 1.116 (13 pages including this certification) and the attached Patent Abstract of Japan for Japanese publication No. 2000-294856 (2 pages); is being facsimile transmitted to the U.S. Patent and Trademark Office (Fax No. 703-872-9319) on June 12, 2003.


R Eugene Varndell Jr.

PATENT ABSTRACTS OF JAPAN

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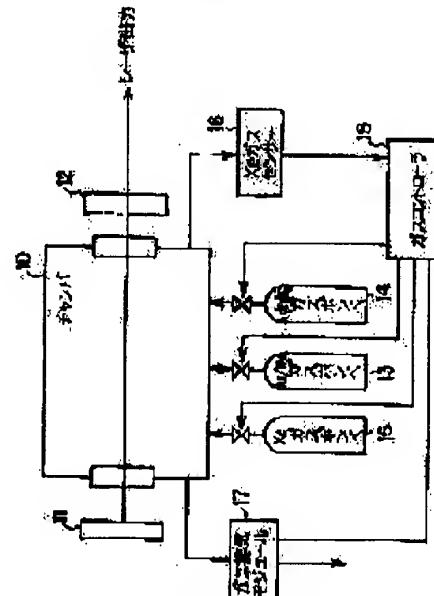
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(54) ULTRAVIOLET LASER DEVICE AND GAS FOR ULTRAVIOLET LASER

(57)Abstract:

PROBLEM TO BE SOLVED: To improve and stabilize a laser output by efficiently improving the burst characteristics and spike characteristics of an ultraviolet laser output in the case of executing a burst operation.

SOLUTION: Xenon gas is doped from a compact Xe gas cylinder 15 to gas for an excimer laser in a chamber 10 supplied from an Ar/Ne gas cylinder 13 and an Ar/Ne/F₂ gas cylinder 14, and the rate of the xenon gas is detected by an Xe gas sensor 16, and the supply of the xenon gas to be supplied from the Xe gas cylinder 15 is controlled by a gas controller 18.



LEGAL STATUS

[Date of request for examination]

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